

Application No. 10/736,625
Reply to the Office action of June 6, 2005

REMARKS/ARGUMENTS

Claims 1 and 3-11 were rejected under 35 USC 102(b) as being anticipated by Ito (US 4,946,346). Claims 1-12 were also rejected under 35 USC 103(a) as being obvious in view of Beeck et al (US 6,565,317).

In view of the amended independent claims 1, 7 and 11 as presently advanced, these rejections are now believed to be moot. Particularly, both Ito and Beeck et al fail to disclosure the subject matter of the present invention as now claimed.

Ito discloses a only an isolated vane, with outer and inner platforms and airfoils extending therebetween. Each airfoil includes a central cylinder 25 defined therewithin through which the cooling air flows to enter the vane assembly. Once such cooling air has circulated through the airfoil, it is fed into flow path passages defined within the upper and lower end walls 23,33. From these flow path passages 31 and 32 within the upper and lower end walls, the air flow is then directed through holes 35 and 36 into the gas path. Accordingly, although some effusion cooling is provided by the air flowing through holes 35 and 36, this cooling air has already been used to cool the inner portions of the airfoil as it flows through the circuitous path therein.

Beeck et al. discloses only an isolated turbine blade, as opposed to a vane assembly, with a platform 3 having an outer surface 2 through which so called blow-out orifices 12 extend. These orifices 12 are in communication with internal plenums 10/30 defined within the platform 3 itself. These plenums collect cooling air before flowing through the orifices 12, and are said to provide convective cooling across the entire platform. Thus, the cooling air is at least partially heated by such convective cooling which occurs within the plenums before passing outwards into the gas path via the orifices 12, which considerably reduces the effectiveness of the effusion cooling effect provided by the orifices 12 on the outer surface of the platform.

Therefore it is submitted that at least independent claims 1, 7 and 11 as presently amended recite structure which is patentably distinct from the prior art devices disclosed by Ito and Beeck et al. At least in view of their dependence on claim 1, 7 and 11, dependent claims 2-6, 8-10 and 12 are also believed to be both novel and inventive over both Ito and Beeck et al. Reconsideration of the rejection of claims 1 and 3-11 as being anticipated by Ito and claims 1-12 as being rendered obvious by Beeck et al. is therefore respectfully requested.

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Claims 1, 7 and 11 as presently advanced are fully supported by the specification as filed, for example as described in paragraphs [0019] and [0020] and as seen in Fig. 4 and in Fig. 8. Therefore no new subject matter has been added.

Applicant respectfully requests that a timely Notice of Allowance be issued in this case.

Respectfully,


August 31, 2005

Date

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